IN THE CLAIMS:

1.   (Original) A method for implementing session initiation protocol (SIP) trunk groups

on a per call basis, the method comprising:

(a)   receiving a first SIP signaling message associated with a new call;

(b)   identifying an incoming SIP trunk group for the new call;

(c)   selecting, based on the incoming SIP trunk group, a first set of per-trunk-

group call processing data from a plurality of sets of different call processing

data associated with different incoming SIP trunk groups; and

(d)   processing the new call using the first set of per-trunk-group call processing

data.

2.   (Original) The method of claim 1 wherein receiving a first SIP signaling message

includes receiving a SIP INVITE message.

3.   (Original) The method of claim 1 wherein identifying an incoming SIP trunk group for

the new call includes examining a via header in the first SIP signaling message and

selecting the incoming SIP trunk group based on the via header.

4.   (Original) The method of claim 1 wherein identifying an incoming SIP trunk group for

the new call includes decoding a predetermined extension from the SIP message

and selecting the incoming SIP trunk group based on the extension.

5.   (Original) The method of claim 1 wherein identifying an incoming SIP trunk group for

the new call includes determining a source IP address of the first SIP signaling

message and selecting the incoming SIP trunk group based on the source IP

address.

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6.   (Original) The method of claim 1 wherein processing the new call using the first set of per-trunk-group call processing data includes routing the new call to a SIP peer in a SIP logical peer group associated with the incoming trunk group by the first set of per-trunk-group call processing data.

7.   (Original) The method of claim 1 wherein processing the new call using the first set of per-trunk-group call processing data includes routing the new call to a peer of a redundant set of peers associated with the incoming trunk group by the first set of per-trunk-group call processing data.

8.   (Currently Amended) The method of claim 1 wherein processing the new call using the first set of per-trunk-group call processing data includes routing the new call to a SIP peer based on operational status information regarding SIP peers associated with the incoming trunk group by the first set of the per-trunk-group call processing data.

9.   (Original) The method of claim 1 wherein processing the new call using the first set of per-trunk-group call processing data includes processing the new call based on profiles associated with the incoming trunk group by the first set of per-trunk-group call processing data.

10.   (Original) The method of claim 1 wherein processing the new call using the first set of per-trunk-group call processing data includes processing the new call based on protocol variant information and vendor-specific information regarding a SIP peer associated with the incoming trunk group by the first set of per-trunk-group call processing data.

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11.   (Original) The method of claim 1 wherein processing the new call using the first set
       of per-trunk-group call processing data includes screening the new call using call
       screening parameters associated with the incoming SIP trunk group by the first set
       of per-trunk-group call processing data.

12.   (Currently Amended) The method of claim 1 wherein processing the new call ~~based~~
       ~~on~~ using the first set of per-trunk-group call processing data includes processing the
       new call based on a privacy policy associated with the incoming trunk group by the
       first set of per-trunk-group call processing data.

13.   (Currently Amended) The method of claim 1 wherein processing the new call using
       the first set of per-trunk-group call processing data includes selecting [[the]] <u>an</u>
       outgoing trunk group from a plurality of outgoing trunk groups associated with the
       incoming trunk group by the first set of per-trunk-group call processing data.

14.   (Original) The method of claim 1 wherein processing the new call using the first set
       of per-trunk-group call processing data includes applying quality of service routing to
       the call using QoS parameters specified for the incoming trunk group in the first set
       of per-trunk-group call processing data.

15.   (Original) The method of claim 1 wherein processing the new call using the first set
       of per-trunk-group call processing data includes processing the new call based on
       bearer capability routing defined for the incoming trunk group in the first set of per-
       trunk-group call processing data.

16.   (Original) The method of claim 1 wherein processing the new call using the first set
       of per-trunk-group call processing data includes processing the new call based on

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carrier routing defined for the incoming trunk group in the first set of per-trunk-group call processing data.

17. (Original) The method of claim 1 wherein processing the new call using the per-trunk-group call processing data includes processing the new call based on an advanced intelligent network function associated with the incoming trunk group by the first set of per-trunk-group call processing data.

18. (Original) The method of claim 1 wherein processing the new call using the per-trunk-group call processing data includes processing the new call based on routing policies defined for the incoming trunk group in the first set of per-trunk-group call processing data.

19. (Original) The method of claim 1 wherein processing the new call using the first set of per-trunk group call processing data includes generating customized billing information specified for the incoming trunk group in the first set of per-trunk-group call processing data.

20. (Original) The method of claim 1 comprising receiving a second SIP signaling message associated with a second new call, identifying a different incoming SIP trunk group for the second signaling message, selecting a second set of per-trunk-group call processing data using the incoming trunk group identified for the second SIP signaling message, and processing the second new call using the second set of per-trunk-group call processing data.

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21.   (Original) A session initiation protocol (SIP) call processor comprising:

   (a)   an incoming trunk group identifier for identifying an incoming SIP trunk group associated with a first SIP call based on one or more parameters in a first SIP signaling message received for the first call;

   (b)   a per-trunk-group call processor operatively associated with the incoming trunk group identifier for implementing per-incoming-trunk-group call processing based on the incoming SIP trunk group identified for each received call; and

   (c)   a plurality of per-trunk-group call processing data sets usable by the per-trunk-group call processor for applying differentiated processing for calls on different incoming SIP trunk groups, each of the per-trunk-group call processing data sets being assigned to an incoming SIP trunk group and containing instructions for processing calls from the assigned incoming SIP trunk group, wherein the per-trunk group call processor is adapted to select a first per-trunk-group call processing data set for processing the first call and to process the first call using data in the first per-trunk-group call processing data set.

22.   (Original) The SIP call processor of claim 21 wherein the incoming trunk group identifier is adapted to identify the incoming SIP trunk group for the first call based on a predetermined parameter in a via header of the first SIP signaling message.

23.   (Original) The SIP call processor of claim 21 wherein the incoming trunk group identifier is adapted to identify the incoming SIP trunk group for the first call based on a SIP extension in the first SIP signaling message.

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24.   (Original) The SIP call processor of claim 21 wherein the incoming trunk group identifier is adapted to identify the incoming SIP trunk group for the first call based on a source IP address associated with the first SIP signaling message.

25.   (Original) The SIP call processor of claim 21 wherein the per-trunk-group call processor is adapted to route the first call to a peer SIP entity based on peer entities defined for the incoming SIP trunk group for the first call in the first per-trunk-group call processing data set.

26.   (Original) The SIP call processor of claim 21 wherein the per-trunk-group call processor is adapted to route the first call to a peer among a set of redundant peers defined for the incoming SIP trunk group for the first call in the first per-trunk-group call processing data set.

27.   (Original) The SIP call processor of claim 21 wherein the per-trunk-group call processor is adapted to route the first call to an available peer associated with the incoming SIP trunk group identified for the first call based on peer entity status maintained in the first per-trunk-group call processing data set.

28.   (Original) The SIP call processor of claim 21 wherein the per-trunk-group call processor is adapted to perform call screening for the first call based on call screening parameters in the first per-trunk-group call processing data set.

29.   (Original) The SIP call processor of claim 21 wherein the per-trunk-group call processor is adapted to apply a privacy policy to the first call based on a privacy policy defined in the first per-trunk-group call processing data set.

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30.   (Original) The SIP call processor of claim 21 wherein the per-trunk-group call processor is adapted to identify trusted peers associated with an originator of the first call based on the first per-trunk-group call processing data set.

31.   (Original) The SIP call processor of claim 21 wherein the per-trunk-group call processor is adapted to apply a quality of service (QoS) or a cost of service (CoS) routing policy based on data specified for the incoming trunk group in the first per-trunk-group call processing data set.

32,   (Original) The SIP call processor of claim 21 wherein the per-trunk-group call processor is adapted to apply bearer capability routing based on bearer capabilities defined for outgoing trunk groups associated with the incoming trunk group for the first call in the first per-trunk-group call processing data set.

33.   (Original) The SIP call processor of claim 21 wherein the per-trunk-group call processor is adapted to apply a carrier routing policy based on carrier routing parameters defined for the incoming trunk group identified for the first call in the first per-trunk-group call processing data set.

34.   (Currently Amended) The SIP call processor of claim 21 wherein the per-trunk-group call processor is adapted to perform predetermined advanced intelligent network (AIN) functions for the first call based on AIN functions defined for the incoming trunk group identified for the first call in the first per-trunk-group call processing data set.

35.   (Currently Amended) The SIP call processor of claim 21 wherein the per-trunk-group call processor is adapted to apply a routing policy to the first call using the first per-trunk-group call processing data set.

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36.   (Original) The SIP call processor of claim 21 wherein the per-trunk-group call processor is adapted to collect accounting information for the first call specified for the incoming trunk group in the first per-trunk-group call processing data set.

37.   (Currently Amended) The SIP call processor of claim 21 wherein the per-trunk-group call processor is adapted to route the first call to an <u>interactive voice response (IVR)</u> server for digit collection and announcements based on the first per-trunk-group call processing data set.

38.   (Original) The SIP call processor of claim 21 wherein the incoming trunk group identifier is adapted to identify an incoming trunk group for a second call based on a second received SIP signaling message, and wherein the per-trunk-group call processor is adapted to select a second per-trunk-group call processing data set for processing the second call based on the incoming SIP trunk group identified for the second call and to process the second call differently from the first call using the second per-trunk-group call processing data set.

39.   (Previously Presented) The method of claim 1 comprising maintaining operational status of SIP peers based on heartbeat messages sent to and received from each peer.

40.   (Previously Presented) The method of claim 39 wherein processing the new call includes selecting an outgoing trunk group for the new call based on the operational status maintained for each peer.